

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Commonwealth Edison Company)

Petition for expedited approval of)
implementation of a market-based)
alternative tariff, to become effective on)
or before May 1, 2000, pursuant to)
Article IX and Section 16-112 of the)
Public Utilities Act)

Docket No. 00-0259

(cons.)

Central Illinois Public Service Company)
Union Electric Company)

Docket No. 00-0395

Petition for approval of revisions to)
market value tariff, Rider MV)

Illinois Power Company)

Docket No. 00-0461

Proposed new Rider MVI and)
Revisions to Rider TC)

**Note: This Version of the Testimony
Excludes Information Deemed by
ComEd as CONFIDENTIAL**

Redacted Direct Testimony of

Linda E. Bowyer

On Behalf of

Illinois Industrial Energy Consumers

August 2000

OFFICIAL FILE

ILL. C. C. DOCKET NO. 00-0259/0395/0461

EXHIBIT 1

Witness _____

Date 10-2-00 Reporter CD

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Redacted Direct Testimony of Linda E. Bowyer

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A Dr. Linda E. Bowyer, 149 Partridge Lane, Perrysburg, OH 43551.**

3

4 **Q ON WHOSE BEHALF ARE YOU HERE TODAY?**

5 **A I am here providing testimony on behalf of the Illinois Industrial Energy Consumers**

6 **("IIEC").**

1 **Q PLEASE STATE YOUR PROFESSIONAL QUALIFICATIONS AND**
2 **EXPERIENCE.**

3 **A** I am currently an associate professor of finance and Director of the Small Business and
4 Entrepreneurship Institute at the University of Toledo. I received my bachelor's degree
5 (1977) in Chemistry and a Ph.D. in Economics with a minor in Engineering Valuation
6 (1981) from Iowa State University. Since receiving my doctorate, I have served on the
7 finance faculty of the University of Cincinnati, the University of Missouri-Kansas City and
8 the University of Toledo. My areas of teaching and research interests include investments,
9 speculative markets and financial institutions. I have published articles in eleven referenced
10 journals, such as Finance Review, The Review of Futures Markets and Quarterly Journal of
11 Business and Economics. I have also served as an expert witness on numerous cases
12 involving investments in stocks, futures and options. In 1999 and 2000, I testified on behalf
13 of the IIEC in cases involving market value index determination for Illinois Power
14 Company (Illinois Power or IP), Commonwealth Edison Company (Commonwealth Edison
15 or ComEd), and Ameren UE/CIPS. Further details on my background are available in my
16 vita, which is attached as Schedule 1.

17 **PURPOSE AND SCOPE**

18 **Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

19 **A** The purpose of my testimony is to describe what I believe to be serious flaws with Illinois
20 Power and Commonwealth Edison's proposed market value index (MVI), which will
21 establish the market prices of power and energy to be used in calculating transition charges

1 under transition charge riders and in establishing the pricing for energy supplied under their
2 power purchase option services. The methodology used to calculate the Illinois Power
3 market value index is discussed in the prepared testimony of Leonard M. Jones and Mark
4 Pcters [IP Exhibit 2.1], Jacqueline K. Voiles [IP Exhibit 3.1] and Phillip G. Breezel {IP
5 Exhibit 1.1] all dated July 7, 2000, which I reviewed in preparation of this testimony. The
6 methodology used to calculate the Commonwealth Edison MVI is discussed in the prepared
7 testimony of Arlene A. Juracek [ComEd Exhibit C-1], Paul R. Crumrine [ComEd Exhibit C-
8 3] and David E. Nichols [ComEd Exhibit C-2], all dated March 31, 2000, which I reviewed
9 in preparation of this testimony, as well.

10 **ILLINOIS POWER**

11 **I. USE OF MARKET INDEX APPROACH**

12 **Q DO YOU HAVE ANY COMMENTS WITH RESPECT TO ILLINOIS POWER'S**
13 **MVI?**

14 **A** Yes. My comments or criticisms involve the use of the Cinergy forward contract to
15 determine market value. The market value, according to counsel and as defined in Section
16 16-112(a) of the Illinois Public Utilities Act (220 ILCS 5/16-112(a)) is to be determined by
17 the neutral fact finder process or "as a function of an exchange traded or other market traded
18 index, options or futures contract or contracts applicable to the market in which the utility
19 sells, and the customers in its service area buy". The proposed Illinois Power MVI uses
20 Cinergy forward prices as its "market traded index". As the Cinergy forward price
21 represents prices in a market outside of the market in which Illinois Power sells and its

1 customers buy, this has the effect of creating a proxy for a market price which IP believes is
2 relevant to its service territory. This proxy is the Cinergy forward price. Assuming the use
3 of a proxy is legally permissible, it is unlikely that the Cinergy forward price reflects an
4 appropriate proxy.

5 **Q WHY DO YOU CONTEND THE CINERGY FORWARD PRICE IS AN**
6 **INAPPROPRIATE PROXY?**

7 **A** There are several reasons. In my opinion, the methodology proposed by Illinois Power is
8 flawed in five major areas.

- 9 i) thinness of the market being used for calculation of market value;
10 ii) potential for manipulation of the market due to the thinness and the
11 methodology being employed;
12 iii) the unregulated nature of the Internet-based markets being used as ^{PART OF} the
13 market;
14 iv) the problems connected with customer access to trading and price
15 information in these markets; and
16 v) potential for basis miscalculation and instability.

1 **II. A. iii. LIQUIDITY/SIZE OF MARKETS**

2 **Q WHAT IS THE PROBLEM IN DETERMINING MARKET VALUE IN A THINLY**
3 **TRADED MARKET?**

4 A There are two potential problems with using prices in a low volume market as market value.
5 First, a thinly traded market leaves open the possibility of price manipulation, with a utility
6 or other entity able to move price up or down by purchasing or selling forward contracts on
7 a specific date. In a low volume market, the number of contracts necessary to move price
8 would be relatively small. According to Michael Burke, President of Altra Energy
9 Technologies, the parent company of Altrade System, only 2% of the electricity trades are
10 done electronically. (Megawatt Daily, Tuesday April 4, 2000). The IP proposal will
11 determine market value for customers in Illinois on a monthly basis using twice a day
12 "snapshots" over a ten-day period and a market with less than 2% of the volume in the
13 market. While the IP proposal currently uses three data sources for market data (Altrade,
14 Bloomberg and Power Markets Week), there is a possibility that the on peak market value
15 calculated under the IP methodology might not be based on the price of an actual
16 transaction, but on bid and asked prices, which do not represent actual transactions or trades.

17 Second, IP is using the forward market price as a proxy for cash energy prices in
18 Illinois. The Into Cinergy price is not identical however to the Into IP price. IP witnesses
19 Jones and Peters even state that the Into Cinergy hub is "reasonably close to the IP service
20 area." [IP Exhibit 2.1, p. 10] Stating these markets are "reasonably close" implies the two
21 markets are not identical. Being "reasonably close" is unsuitable for developing market

1 prices, under these circumstances. Furthermore, proximity is irrelevant and immaterial
2 without data showing prices in the two markets (Into IP and Into Cinergy) are related.

3 There is likely to be an unstable relationship between those two markets, because
4 price in the Into Cinergy forward market is determined by only a small number of trades.
5 According to IP witnesses Jones and Peters [IP Exhibit 2.1], during a sample model period
6 of April 24 - May 5 (10 trading days), "we observed at least 103 actual trades in the sample
7 and only one contract - April 2001 - did not have any actual trades". [IP Exhibit 2.1, page
8 10]. Given that data is collected for 12 months of forward contracts over 10 days, this
9 means that there were only an average of 10 trades per day in 12 different contract months,
10 or less than one contract traded per month per day.

11 Therefore, IP's representations regarding liquidity in these markets are overstated.
12 And even if one assumes that the Into Cinergy hub is the most active hub reasonably close
13 to the IP service area, there is no showing by IP witnesses that the prices generated in that
14 market with limited liquidity, accurately reflect prices at which consumers in Illinois buy
15 power.

16 **II. B. 2. CONCERNS RE BIAS/MANIPULATION/UNREGULATED NATURE**

17 **Q DOES MARKET THINNESS AFFECT THE POTENTIAL FOR MANIPULATION?**

18 **A** Yes, it does. Due to the thinness of the market described above, the potential for
19 manipulation is great. When actual trades do not exist on the Bloomberg historical database
20 or in Power Markets Week, the IP proposal will use "screen prints" from Altrade market,
21 gathered by IP sometime during a 2-hour window twice a day over a ten day period. Under

1 this methodology, IP will have an advantage in terms of market knowledge, which could be
2 exploited to its benefit. By knowing the exact time the screen print will be taken during the
3 two hour window (a piece of information that would be known only to IP), bids or offers
4 could be posted by IP or a trading affiliate which would ultimately affect the MVI,
5 especially for contract months with no actual trades. This posting of bids and offers need
6 only be done for a few seconds while the screen print is being done and can be removed as
7 soon as the data is collected.

8 **Q HOW COULD DATA COLLECTION ON ALTRADE BE ALTERED TO REDUCE**
9 **THIS ADVANTAGE?**

10 **A** An independent third party could collect the data during the two hour window twice a day
11 for the ten day period. This third party could be Illinois Commerce Commission staff or a
12 private individual with expertise in data collection (e.g. accountant, university professor, or
13 consultant) hired to do this simple data collection. This would require a subscription to the
14 various data services, such as Altrade, Bloomberg, and Power Markets Week. The purpose
15 being, if the Illinois Commerce Commission staff, for example, had "read-only" access to
16 the Altrade trading screen, as well as the Bloomberg historical database, public confidence
17 would be heightened as the possibility of manipulation would be greatly reduced.
18 Unfortunately, these data sources are very expensive and in the case of Altrade, currently
19 unavailable to non-traders in the wholesale market. The difficulty demonstrates the
20 problems mentioned in items (iii) and (iv) listed above, regulation of Internet based markets
21 and customer access to data and information.

1 **Q FOR HOW LONG WOULD THE PROCEDURES YOU HAVE DESCRIBED NEED**
2 **TO BE IN PLACE?**

3 **A For as long as the proposed versions of the market value index tariffs are in place. The**
4 **market index values are used for determining transition charges and prices under power**
5 **purchase option service. I am advised by counsel, that the governing law provides these**
6 **transition charges and service could exist until December 31, 2006 for ComEd. For IP, the**
7 **law provides the possibility of a two year extension beyond December 31, 2006. Therefore**
8 **the maximum possible length appears to be until December 31, 2008.**

9 **Q ARE THERE ISSUES CONNECTED WITH LACK OF REGULATION OF THESE**
10 **"INTERNET BASED MARKETS"?**

11 **A Yes, there are. Internet based markets are unregulated by federal securities regulators such**
12 **as the Securities and Exchange Commission and Commodities Futures Trading**
13 **Commission. Regulatory oversight does not exist in relation to the underlying data from**
14 **Altrade and Bloomberg Power Match, which are incorporated into both the Illinois Power**
15 **and ComEd proposals. A lack of oversight by a governmental agency or at least internal**
16 **rules and procedures for the exchange, (which may or may not exist in the case of Altrade or**
17 **Bloomberg), only adds greater weight to the concerns for potential manipulation given the**
18 **thinness of the markets proposed for use in the market value index determination.**

1 **II. B. i. 3. TRANSPARENCY/ACCESS**

2 **Q ARE THERE ACCESS RELATED PROBLEMS WITH THE UTILITY**
3 **PROPOSALS?**

4 A Access to data from these markets by customers and others outside of the utility industry is
5 limited due to the subscriber nature of these services. It is currently not possible for a non-
6 trader in power to view the Altradc screens in real time or even publicly disseminate the
7 screen prints generated by Illinois Power on a twice daily basis for the ten day period each
8 month, as the data is considered proprietary. This lack of transparency and access by retail
9 electric customers makes it difficult for customers to have confidence that the market value
10 for power, calculated by IP in this methodology, is accurate. Therefore, customer
11 participation in and oversight of the market is stymied.

12 **Q DO YOU PERCEIVE ANY PROBLEMS WITH THE DETERMINATION OF THE**
13 **REGIONAL BASIS ADJUSTMENT BETWEEN CINERGY PRICE AND THE**
14 **CASH PRICE FOR POWER IN ILLINOIS?**

15 A Yes, I do. The basis adjustment, as discussed by Messrs. Jones and Peters is "equal to the
16 quotient resulting from the division of values for the daily On-peak Lower Main Energy
17 Price by the values for the daily On-peak Into Cinergy Energy Price for each of the 12
18 month contracts". [IP Exhibit 2.1, p. 13] The testimony and evidence presented by Illinois
19 Power lacks data and sample calculations to demonstrate that this methodology yields an
20 appropriate adjustment of Into Cinergy to Into IP prices.

1 **Q ARE THERE ANY PROBLEMS WITH THE PROPOSED FREQUENCY OF THE**
2 **BASIS ADJUSTMENT CALCULATIONS?**

3 **A As this basis adjustment calculation is only made once a year in the IP proposal, any**
4 **changes in the basis adjustment during the year will not be reflected in the market value**
5 **calculation. Given the newness of these internet-based markets and the current lack of**
6 **liquidity, it can be anticipated that the relationship between the Into IP and the Into Cinergy**
7 **market may change as the forward markets for power mature. By calculating the basis**
8 **annually, these anticipated changes may not be picked up until the next annual calculation.**
9 **Also, the lack of data and sample calculations in the testimony and evidence makes it**
10 **difficult to assess how accurate the basis adjustment proposed actually is in modifying**
11 **Cinergy prices to conform to Illinois power prices.**

12 **COMMONWEALTH EDISON**

13 **I. USE OF MARKET INDEX APPROACH**

14 **Q DO YOUR CRITICISMS OF THE ILLINOIS POWER PROPOSAL DIFFER**
15 **FROM YOUR COMMENTS WITH RESPECT TO THE COMMONWEALTH**
16 **EDISON MVI?**

17 **A No, not for the most part. Four of the five major flaws that exist with the Illinois Power**
18 **MVI also exist for Commonwealth Edison's proposed MVI. These flaws include:**

- 19 i) thinness of the market being used for calculation of market value;
20 ii) potential for manipulation of the market due to the thinness and the
21 methodology being employed;

- 1 iii) the unregulated nature of the Internet-based markets being used as the
2 market; and
3 iv) the problems connected with customer access to trading and price
4 information in these markets.

5 As the Commonwealth Edison proposal uses the "Into ComEd" forward markets, no
6 basis adjustment is necessary. While this eliminates one flaw, other flaws are more
7 significant in the Commonwealth Edison proposal than in the Illinois Power proposal.

8 **II. B. i. 2. CONCERNS RE BIAS/MANIPULATION/UNREGULATED NATURE**

9 **Q IS THE PROBLEM OF POTENTIAL MANIPULATION SIGNIFICANT IN THE**
10 **COMED PROPOSAL?**

11 **A**The potential for manipulation is increased due to the thinness of the ComEd forward
12 markets and the methodology's reliance on bid-asked prices, as opposed to actual trades, to
13 determine market value. Many of the "prices" used by ComEd to develop the on-peak
14 market value under its proposal are really not prices at all, but averages of posted bid and
15 ask quotes, not representing actual trades. There is no indication that the average bid and
16 asked quotes are currently representative of the relevant market. According to the ComEd
17 response to IIEC Data Request No. 3, dated April 17, 2000, [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

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Illinois

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Power, in its response to IIEC Data Request No. 7, states that it believes "that actual trade data is a better representation of the market's perception of value". I agree.

6

7 Q

WHAT CAUSES YOU TO BELIEVE THE INTO COMED MARKET CAN BE MANIPULATED?

8

9 A

Commonwealth Edison's position in the forward market as a trader, posting bid and asked prices on a regular basis, increases the likelihood of manipulation, especially given the thinness of the Into ComEd market

10

11

12

13

Even

14

Illinois Power in its data response to IIEC Request No. 17 states that "IP does not believe that it is appropriate to include data sources that are heavily dominated by single participants, particularly in light of the concerns of some parties regarding market manipulation".

15

16

17

18

Under the ComEd proposal, it will be ComEd and not the neutral fact finder who will be determining market value on the basis of a thinly traded index, based primarily on bid and ask quotes, not actual trades, which are not regularly available to retail customers, at

19

20

1 a point in time determined by ComEd, in a market dominated by bids and offers made by
2 ComEd. This undermines the integrity of the process for determining market value.

3 **Q ARE THERE PROBLEMS REGARDING CUSTOMER ACCESS TO TRADING**
4 **AND PRICE INFORMATION IN THE COMED PROPOSAL?**

5 A Yes. In its response to IIEC Data Request No. 24, dated April 17, 2000, ComEd states that
6 the Commission could verify the accuracy of bid/ask data through an audit of information
7 supplied. This would only be for the information supplied by ComEd; the price data could
8 not be independently audited by the Commission staff without a subscription to the relevant
9 data services. However, "other parties cannot verify all such information because both Altra
10 Energy Technologies and Bloomberg have signed contracts with each market participant
11 protecting the identity of those participants with regard to transactions occurring in those
12 systems". In other words, other than registered traders, the system is not transparent to
13 outside parties. This increases the likelihood of reduced confidence in the accuracy of the
14 MVI and the probability of market manipulation.

15 **Q DOES THAT CONCLUDE YOUR TESTIMONY?**

16 A Yes.

LINDA E. BOWYER

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Perrysburg, Ohio 43551
(419) 874-4170

research: women and minority business ownership, financial institution risk management, market efficiency

Iowa State University	Chemistry	B.A.	1977
Iowa State University	Economics	Ph.D.	1981

Dissertation:
"The Effect of Bank Mergers on a Bank's Market Share"

University of Toledo	Small Business and Entrepreneurship Institute	1997-present
University of Toledo	Chairman, Department of Finance	1991-1993
University of Toledo	Associate Professor of Finance	1989-present
University of Missouri-Kansas City	Assistant Professor of Finance	1985-1989
University of Cincinnati	Assistant Professor of Finance	1981-1985

Courses Taught: Speculative Markets (graduate), Financial Institutions and Markets (graduate and undergraduate), Investments (undergraduate and graduate), Personal Finance (undergraduate), Beginning Financial Management (undergraduate)

REFEREED PUBLICATIONS

Monograph

"Hedging a Bank's Municipal Bond Portfolio--A Workbook," The Prochnow Reports, #PR-013, January 1989.

Articles

- 1) "A Comparison of Canadian and United States Banking Systems and Cross Border Banking Activity", with G. Smolen, Ohio Journal of Politics and Economics", October 1992, 6(2), 92-102.
- 2) "On the Impact on Stock Returns and Volume for OTC Equity Issues Added to the List of Marginable OTC Stocks", with D. Klein and G. Wolfe, Financial Review, 27(1), February 1992.
- 3) "Stock Repurchases: A Multivariate Analysis of Repurchasing Firms", with P. Medury and V. Srinivasan, Quarterly Journal of Business and Economics, Winter 1992.
- 4) "Additions to the NASDAQ National Market System: An Analysis of Stock Returns and Trading Volume", with D. Klein and G. Wolfe, Journal of Applied Business Research, Winter 1991-92.
- 5) "Home State savings: Characteristics of a Deposit Insurance Fund Crisis", with A.F. Thompson and V. Srinivasan, Southern Ohio Business Review, Spring 1989.
- 6) "Selling Bonds: The Results of A Survey on Debt Issuance", with S. Wilson, P. Gombert and K. Johnson, Journal of School Business Management, Vol. 1, #1, April 1989.
- 7) "Hedging a Municipal Bond Portfolio", Municipal Finance Journal, Vol. 9, #4, Fall 1988.
- 8) "The Effect of Futures Trading on the Municipal Bond Market", with D. Klein and G. Whittaker, The Review of Futures Markets, May 1987.
- 9) "The Ohio Banking Crisis: A Lesson in Consumer Finance", with A. Thompson and V. Srinivasan, Journal of Consumer Affairs, Vol. 20, NO. 2, 1986.
- 10) "Using Financial Futures to Hedge Interest Rates on Corporate Insurance Programs", with A.F. Thompson, Journal of Insurance Issues and Practices, June 1984.
- 11) "Truth in Investing: The Need for Legislation", with P. Glasgo and A.F. Thompson, Journal of Consumer Affairs, Vol. 18, No. 1, 1984.

Proceedings

- 1) "Women-Owned Family Businesses: Results of a Survey", Family Firm Institute 1996 Conference Proceedings, October 1996.
- 2) "The Use of Cases and Simulations in the Training of Federal Bank Examiners", with A. F. Thompson, Proceedings of the Midwest Society for Case Research, March 1990.
- 3) "Small Investor Attitudes Toward Risk: Lessons from an In-Class Trading Game", with D. Klein, Proceedings of the Midwest Society for Case Research, March 1988.
- 4) "Portfolio Insurance", with D. Eshnaur, Proceedings of the Academy of Financial Services, October 1987.
- 5) "The Ohio State Banking Crisis: A Survey of Home State Depositors", with A. F. Thompson and V. Srinivasan, Proceedings of the Midwest Decision Sciences Institute, 1986.
- 6) "Addition to or Deletion from the Dow: How are Share Prices Affected?", with D. Klein and S. DeLurgio, Proceedings of the Midwest Decision Sciences Institute, 1986.
- 7) "Theoretical Propositions on the Impact Net Worth Requirements have on Stock SLA's", with A. Thompson and A. Bhattacharya, Proceedings of the American Institute for Decision Sciences, 1985.

NON-REFEREED PUBLICATIONS

- 1) "United States and Canadian Banking Reforms: What Should the Ohio Banker Know?" with Gerald E. Smolen, Ohio Banker, 83(3), May/June 1990.
- 2) "United States and Canadian Banking Reforms: What will the Free Trade Act bring to the table?" with Gerald E. Smolen, The Ohio Economy, November 1989.
- 3) "Who Does Rate Swaps?" with A.F. Thompson, Federal Home Loan Bank Board Journal, Vol. 19, #1, January 1989.
- 4) "A Cross-Sectional Analysis of Interest Rate Swap Agreements among FSLIC insured Thrifts", with A.F. Thompson and D. Edwards, Federal Home Loan Bank Board Invited Research Working Paper No. 132, July 1987.
- 5) "Theoretical Propositions on the Effect Minimum Net Worth Requirements have on Insolvency and Bankruptcy for Stock Savings and Loan Associations", with A.F. Thompson and A. Bhattacharya, Federal Home Loan Bank Board Invited Research Working Paper No. 51, March 14, 1985.

PRESENTATIONS MADE

- 1) "An Analysis of the U.S. and Canadian Life Insurance Industry", at the Midwest Association for Canadian Studies, September 1994, Toledo, OH (with G. Moore).
- 2) "Additions to the NASDAQ National Market System: An Analysis of Returns and Trading Volume", at the Financial Management Association Meeting, Chicago, IL, October 11, 1991, (with G. Wolfe and D. Klein).
- 3) "The Effect of Marginability on Stock Returns and Volume for OTC Equity Issues", at the Eastern Finance Association Meeting, Hot Springs, VA, April 1991, (with G. Wolfe and D. Klein).
- 4) "The United States-Canada Free Trade Agreement and its Effect on Banking", at the North American Economics and Finance Association meeting, Washington, D.C., December 1990, (with Gerald Smolen, Ph.D.).
- 5) "Comparing Canadian and United States Banking Systems: The Implications of the Free Trade Act on Performance and Market Structure", at the Midwest Association for Canadian Studies Conference, Lexington, Kentucky, October 1990, (with Gerald Smolen, Ph.D.).
- 6) "A Comparison of Canadian and United States Banking Systems: What will be the effect of the Free Trade Agreement?" at the Academy of Financial Services Meeting, Orlando, Florida, October 1990, (with Gerald Smolen, Ph.D.).
- 7) "A Logistic Regression Analysis of Stock Repurchasing Firms", at the Midwest Finance Association Meetings, March 1989, (with P. Medury and V. Srinivasan).
- 8) "Evaluating the Post-Acquisition Performance of Failed Commercial Banks", at the Midwest Finance Association Meetings, March 1989, (with N. Varaiya).
- 9) "Stock Repurchases: A Multivariate Analysis of Repurchasing Firms", at the Financial Management Association Meeting, October 1988, (with P. Medury and V. Srinivasan).
- 10) "A Longitudinal Analysis of Interest Rate Swaps Among Financial Institutions", presented at the North American Economics and Finance Association Meetings, December 1987 (with A.F. Thompson).
- 11) "Home State Savings: Characteristics of a Deposit Insurance Crisis", presented at the Southern Risk and Insurance Association Meetings, November 1987 (with A.F. Thompson).
- 12) "The Effect of Futures Trading on the Municipal Bond Market", presented at the Chicago Board of Trade Spring Research Seminar, May 1987 (with G. Whittaker and D. Klein).

- 13) "The Use of Financial Swaps by Savings and Loan Associations", University of Kansas Finance-Accounting Workshop, April 17, 1987.
- 14) "Changes in the Dow Jones Industrial Average: 1956-1986", presented at the Midwest Finance Association Meetings, March 1987 (with D. Klein and S. Delurgio).
- 15) "The Effects of Futures Trading on the Municipal Bond Market", presented at the Midwest Finance Association Meetings, March 1987 (with G. Whittaker and D. Klein).
- 16) "The Use of Financial Swaps by Savings and Loans", presented at the Midwest Finance Association Meetings, March 1987 (with A.F. Thompson).
- 17) "Stock Repurchases through Cash Tender Offers: A Multivariate Analysis of Repurchasing Firms," presented at the Southwestern Finance Association Meetings, March 1986 (with V. Srinivasan and P. Medury).
- 18) "The Effect of Catastrophes on the Municipal Bond Market", presented at the Southern Risk and Insurance Association Meetings, October 1985 (with A.F. Thompson).
- 19) "The Effect of the End of the Quarter on the Fed Funds Rate", presented at the Midwest Finance Association Meetings, April 1984 (with J. Bryant and Y. Kim).
- 20) "Using Financial Futures to Hedge Interest Rate Risk on Corporate Insurance Programs", presented at the Western Risk and Insurance Annual Meeting, January 1983 (with A.F. Thompson).
- 21) "The Effect of the Quarterly Refunding on Treasury Bond Futures Prices", presented at the Midwest Finance Association Meetings, April 1983.
- 22) "A Modest Proposal: Truth in Borrowing", presented at the Midwest Finance Association Meeting, March 1983 (with P. Glasgo and A.F. Thompson).

GRANT ACTIVITY

- 1) "The University of Toledo Community Outreach Partnership Center: Social and Economic Empowerment through Community Building", HUD Office of Community Partnerships, \$399,580, September 1999.
- 2) "Women Business Ownership: Commonality and Diversity", a pre-proposal submitted to the Upjohn Institute for Employment Research, \$29,334, January 1998. (Denied)

- 3) "The Ottawa Business Alliance and Internship: A University and Community Endeavor", a proposal to the Ewing Marion Kauffman Foundation, \$45,761 , December 1997 (denied).
- 4) "A Public Workshop for Existing and Potential Minority Business Entrepreneurs", \$3500 grant from the University of Toledo Foundation Program for Academic Excellence, May 1996.
- 5) "Women and Family Business: A Survey of Women Business Owners", \$5,000 grant from the University of Toledo Center for Family Business, awarded October 1995.
- 6) "A Public Workshop for Women and Minority Owned Businesses", grant from the University of Toledo Foundation Program for Academic Excellence, September 1992, \$3,500.
- 7) "An Analysis of the Canadian and U.S. Life Insurance Industry: The Effect of the Free Trade Agreement", grant from the Canadian government for research, 1992-1993, \$4,000 (funded).
- 8) "Evaluating the Profitability of Failed Bank Acquisitions", grant from the University of Toledo Research Awards and Fellowship Program, Summer 1991, \$5,000.
- 9) Donner Foundation, grant for \$18,000 to fund a seminar series on U.S.-Canadian financial institutions and markets, Fall 1990, (unfunded).
- 10) "Canadian and United States Banking Systems: Performance, Foreign Ownership and the Free Trade Act", grant from the Canadian Government for summer 1990 research, \$3,500 (funded).
- 11) "Analyzing the Common Stock Returns of Small and Medium Sized Companies", grant from The University of Toledo Research Excellence Incentive Program, June 1990, \$4,500 (funded).
- 12) Grant for the purchase of a site license of the Finance/Accounting Literature Database for university-wide use, from the Small Grants Fund, Division of business Research Services, Fall 1990, \$395 (funded).
- 13) "Potential Funding Source Evaluation of Risk Assessment in High and Low Technology Business Start-Ups", Small Business Administration, February 1988, \$5,000 (unfunded).
- 14) "Hedging a Bank's Municipal Bond Portfolio: A Workbook", from the Herbert V. Prochnow Educational Foundation, University of Wisconsin, \$5,200 for Summer 1987 research (funded).
- 15) "Rothschild Grant, from the Henry W. Bloch School of Business and Public Administration, University of Missouri-Kansas City, \$3,000 for graduate research assistance, 1986-87 and 1988-89.

SEMINARS AND LECTURES

- 1) "Writing a Business Plan", presentation to the MidAm Bank Women and Minority Business Workshop, 6/4/98.
- 2) "Economic Outlook", presentation to the Midwest Sign Association Annual Meeting, 3/8/98.
- 3) "Banking, Brokerage and Insurance", Federal Financial Institutions Examination Council, 1997 - present, multiple dates.
- 4) Seminar organizer, "Starting Your Business Right!", "Sales Success" and other seminars for the Small Business and Entrepreneurship Institute, January 1998 to present.
- 5) Seminar Speaker, "Women-Owned Businesses: Problems and Possibilities", a presentation to the University of Toledo Women's Commission, November 1996.
- 6) Seminar Speaker, "What Creates Value for Bank Owners?", Assembly for Bank Directors, May 1996, White Sulphur Springs, West Virginia.
- 7) Seminar speaker and organizer, a three part series for residents of public housing to encourage business ownership, "Personal Financial Management" (10/10/95), "Managing Your Time and Your Image" (10/24/95), "Home-Based Business" (11/7/95), co-sponsored by the Lucas County Metropolitan Housing Authority, UT College of Business and Women's Entrepreneurial Network.
- 8) Speaker, "The Northwest Ohio Financial Marketplace", seminar for existing and potential entrepreneurs, Lucas County Public Library, August 3, 1995.
- 9) Speaker, "Leasing vs. Buying: A Business Decision", Women's Entrepreneurial Network Breakfast, April 28, 1995.
- 10) Seminar speaker and organizer, a three part series for existing and potential women business owners "Developing a Dynamic Business Plan", "Financing Your Business as it Grows", "Market Research", 6/95 and 3/96, co-sponsored by the Women's Entrepreneurial Network and UT College of Business.
- 11) Seminar Speaker and Organizer, "Financial Planning for Women", a series of four seminars during January 1995, sponsored by the University Women's Commission.
- 12) Seminar Organizer and Speaker, "Financing your Own Business", for prospective and existing women business owners, funded by the UT Foundation, September 1994.

- 13) Seminar Organizer, "Everything they don't teach you at Business School about Gender Roles", presentation by Dr. Cynthia Iannarelli, co-sponsored by the Women's Entrepreneurial Network, funded by the UT Foundation, May 26, 1994.
- 14) Speaker, Emerging Issues Conference, Federal Financial Institutions Examination Council, "Interest Rate Risk Management and FDICIA: Standards and Measures", 1993-present.
- 15) Speaker, Toledo Financial Analysts Society, "Interest Rate Swaps, Caps. Collars and Floors", April 13, 1993.
- 16) Lecturer, Southwestern Graduate School of Banking, Southern Methodist University, 1986 - present, "New Directions in Banking: Futures, Swaps and Options".
- 17) Instructor, Banking III School for Bank Examiners, "Futures, Options and Swaps", Federal Reserve System, 1987 - 1995.
- 18) Speaker, Off Balance Sheet Risk Conference, Federal Financial Institutions Examination Council, December 1990 - present, "Financial Contracts".
- 19) Lecturer, UMKC Advanced School for Bank Officers, "Using Financial Futures to Hedge Interest Rate Risk", 1986 and 1988.
- 20) Speaker, "An Introduction to Futures and Options", for the management of Farmland Industries, Kansas City, Missouri, April 1988.
- 21) Seminar Speaker, "Tax Reform and Real Estate", sponsored by Coopers and Lybrand and Mackey & Co., November 12, 1986.
- 22) Speaker, "Reducing Risk with Futures and Options", for agricultural banks, co-sponsored by UMKC and the Kansas City Board of Trade, April 1986.
- 23) Speaker, "Pricing in Competitive Markets", a seven-part seminar for the management of Cincinnati Bell, Summer 1983.
- 24) Seminar Director, "Financial Futures: An Introductory Seminar", for banks and savings and loans, co-sponsored by Central Trust Co., Cincinnati, Ohio, April 22, 1982.

OTHER ACTIVITIES

- 1) Summer Intern, Chicago Board of Trade, Summer 1982.
- 2) Radio Show host, "Markets and Money", KCUR-FM, underwritten by the Kansas City Board of Trade, 1985-86.
- 3) Member: UMKE Banking Advisory Board, 1985-1989;
Parallel Fed - January 1990 - 1992.
Toledo Financial Analysts Society
President 1994-95
Secretary 1993-94
Program Chair 1995-present.
- 4) Board of Trustees, Women's Entrepreneurial Network, 1994-present
Midwest Finance Association
Program Committee 1993-present
Board of Directors 1996-present.
- 5) Consultant: Kansas City Board of Trade 1985-1989
- 6) Expert Witness:
Summer 1999, testimony on behalf of Illinois Industrial Energy Consumers in cases involving market value index determination for Commonwealth Edison, Illinois Power and Ameren.
September 1987, City of Abingdon, Illinois vs. Burlington Northern, before the Illinois Commerce Commission
April 1993, Marshall and Melhorn, Appropriateness of investments by financial planner
- 7) Expert Opinions:
November 1996 Wagmiller vs. New Market - Appropriateness of investments by financial planner
September 1996 Fox vs. Kemper Securities - Broker churning case
July 1996 David Walker, Economic Loss Estimation
September 1995 Magidson, Securities broker malpractice
March 1990 First Federal vs. FDIC - Hedging Mismanagement using Financial Futures.
March 1989 Casey Products vs. E.F. Hutton - Determination of monetary damages in alleged pension fund mismanagement.
April 1987 Spradley, Wirken and Riesmeyer - Commodity Futures Trading Case.
July 1986 Gage and Tucker - Options Account Churning Case
March 1986 Farm Credit Banks of St. Louis - Financial Futures Trading Case.